

Drillbench Blowout Control

Contingency planning for relief well and dynamic kill operations

APPLICATIONS

- Planning dynamic kill operations
- Evaluating relief well geometries
- Calculating worst-case discharge rate and total discharge volume
- Predicting required kill mud volume and time to kill
- Evaluating bull-heading operations and other well control options

BENEFITS

- Proactively plan relief wells
- Establish required contingencies and fluid volumes required to kill the well
- Obtain operational decision support through “what-if” analysis
- Create best practices through analysis of incidents

FEATURES

- Powerful and dynamic multiphase model
- Flexible—handles a wide variety of scenarios
- Intuitive interface for enhanced productivity
- Linked to the Petrel* Well Design module to establish the relief well trajectory
- Integrated with the Drillbench* dynamic drilling simulation software workflow
- Multiple simulations run simultaneously, supporting sensitivity assessment
- Planning, training, and post-analysis of operations

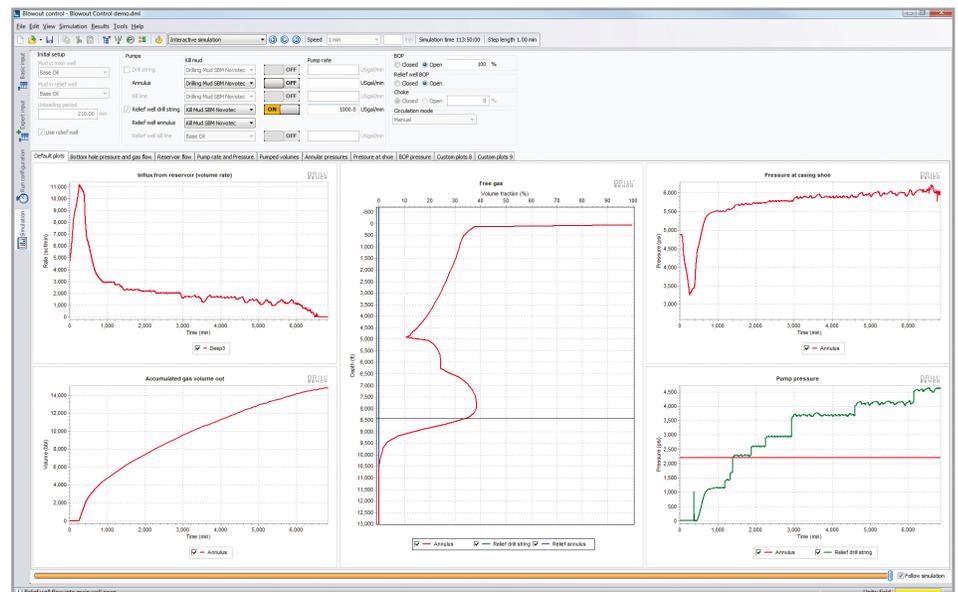
Precise modeling of transient phenomena is paramount for simulating blowout scenarios and operations. Drillbench Blowout Control models a wide variety of blowout scenarios, including surface and subsurface blowout, with a range of control options adding to its flexibility. The software also provides worst-case discharge rate, total discharge, and the volume of kill mud required to kill the well.

The user interface is flexible and intuitive, making it easy to investigate various options. Several simulations can be run on top of each other, enabling you to investigate sensitivities—particularly important in the early planning phase, when there is high uncertainty in the parameters.

Backed by significant research and powered by the OLGA* dynamic multiphase flow simulator, Drillbench Blowout Control provides accurate models you can trust.

Handle blowout scenarios quickly and safely

Knowing the flow rates and mud densities that will successfully kill the well—either through the original wellbore or through a relief well—is crucial to handling a blowout scenario safely and quickly. Using dynamic, multiphase advanced blowout control simulations in the planning phase provides the necessary information for contingency planning (e.g., maximum pressure loads, verification of casing design, blowout rates and volumes, environmental considerations, and casing strengths).

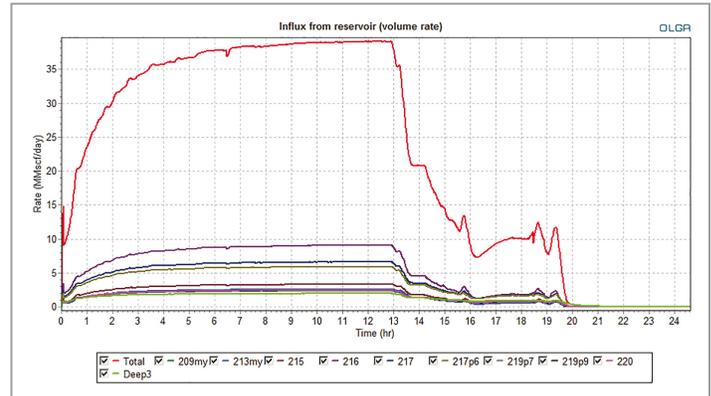


A typical blowout control simulation showing how pumping kill mud through a relief well can control and kill the blowing well.

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The dynamic models reproduce the actual scenario and can then be used to verify the planned contingency operations with the most recent well geometry and operational parameters. This enables you to

- simulate the actual blowout event and verify required flow rates and kill mud densities
- verify changes to contingency plans with changing operational conditions
- analyze operational data and run simulations to replicate the actual operation in order to investigate causes for an event.



Simulation showing influx from the reservoir.

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